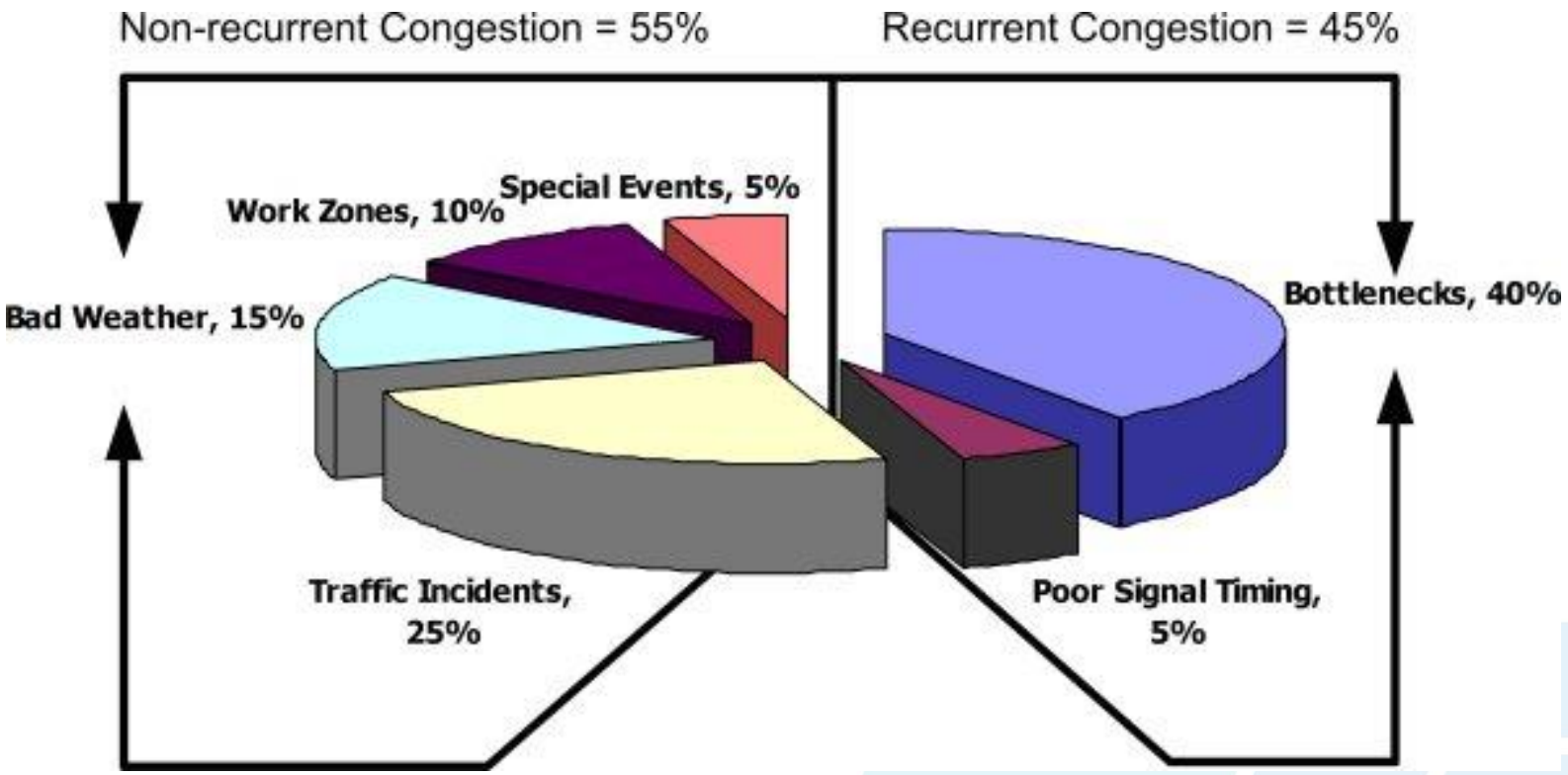
CALTRANS REGIONAL OPERATIONS FORUMS

Traffic Incident Management / Emergency Operations / Planned Special Events

Effects of Events



Managing Non-Recurring Congestion and TSMO

Managing and preparing for these events is an operational philosophy that supports and becomes a foundation for transportation system management and operations (TSMO).

Traffic Incident Management

Traffic Incident Management (TIM)

- Planned, coordinated, multidisciplinary process
- Detect, respond to, and clear traffic incidents
- Restore traffic flow as safely and quickly as possible

- Reduce duration and impacts of traffic incidents
- Improve the safety of motorists, crash victims, and responders

National TIM Program Vision…

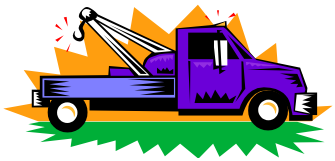
Enhanced planning and training of all TIM personnel:

1. Reduce or eliminate responder and motorist injuries and fatalities
2. Promote rapid incident clearance, thereby reducing traffic congestion and vulnerability
3. Develop or enhance local TIM Programs that ultimately benefit corridors, regions, and states
4. Measure performance that demonstrates improved TIM responses and programs over time
5. Emphasize TIM as a system operations “core mission” for all responders

National Unified Goal for TIM

The NUG for TIM is:

Responder Safety

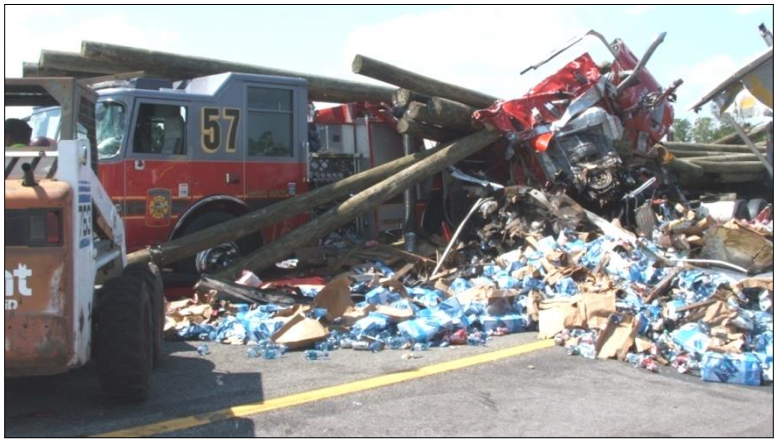


Safe, Quick Clearance

Prompt, Reliable, Interoperable Communications

The Evolving Business Case: Why TIM?

1. **Safety**
   - ↳ Victims
   - ↳ Responders
   - ↳ Travelers



Why TIM?

In California, since 2010, 27 responders have been killed in the line-of-duty while responding to incidents on California's highways:

Law Enforcement - **9 Officers Killed**
Ken Collier, San Diego Sheriff – Feb 28, 2010
Phillip Ortiz, CHP – June 22, 2010
Justin McGrory, CHP – June 27, 2010
Brett Oswald, CHP – June 27, 2010
Ryan Bonaminio, Riverside PD – Nov 7, 2010
Brian Law, CHP – Feb 17, 2014
Juan Gonzalez, CHP – Feb 17, 2014
Kostiuchenko, Ventura Sheriff – Oct 28, 2014
Nathan Taylor – March 13, 2016

Fire Personnel - **2 Responders Killed**
David Ratledge – Feb 29, 2012
Christopher Douglas – Jul 5, 2013

EMS – **2 EMS Personnel Killed**
Esteban Bahena – April 1, 2010
Douglas Odgers – May 8, 2011

Towing - **10 Tow Operators Killed**
Michael Sanders – Feb 7, 2011
Christopher Tatro – Dec 17, 2011
David Robinson – Mar 20, 2012
Jesus Salcedo – Mar 30, 2012
Shaun Riddle – Dec 8, 2012
Faapuna Manu - Dec 8, 2012
Ronald Carver – Feb 11, 2013
Christopher Gladden – July 28, 2013
Ricardo Valdez – January 28, 2014
Jabar Issa – January 17, 2015

Caltrans Maintenance – **4 Workers Killed**
Gary Smith – Nov 7, 2010
Stephen Palmer – May 4, 2011
Jaime Obeso – June 7, 2011
Richard Gonzalez – June 20, 2011

Discussion Item

- What are your current activities and program for TIM?
- Who if any are identified as dedicated TIM staff?
- What has been a significant challenge to your program? How are you addressing that challenge?
- Who should be included in your TIM discussions?

What is a TIM Program?

- The goal of a TIM program is to work towards a more effective, efficient response for all responding agencies
- Conscious effort to coordinate and plan to create an effective, comprehensive TIM program
- TIM programs and associated committees and task forces are sustained and ongoing

TIM Task Forces/Coalitions

- Forum for incident/emergency responders
  - Law Enforcement
  - Fire/EMS
  - Tow Operators
  - Transportation agencies
  - Communications/outreach

- Training, processes, procedures, major incident debriefings, lessons learned
- Central resource for training materials
- Track TIM performance measures
- Legislation awareness
- Other Benefits?

WaTIMCo
Washington Traffic Incident Management Coalition

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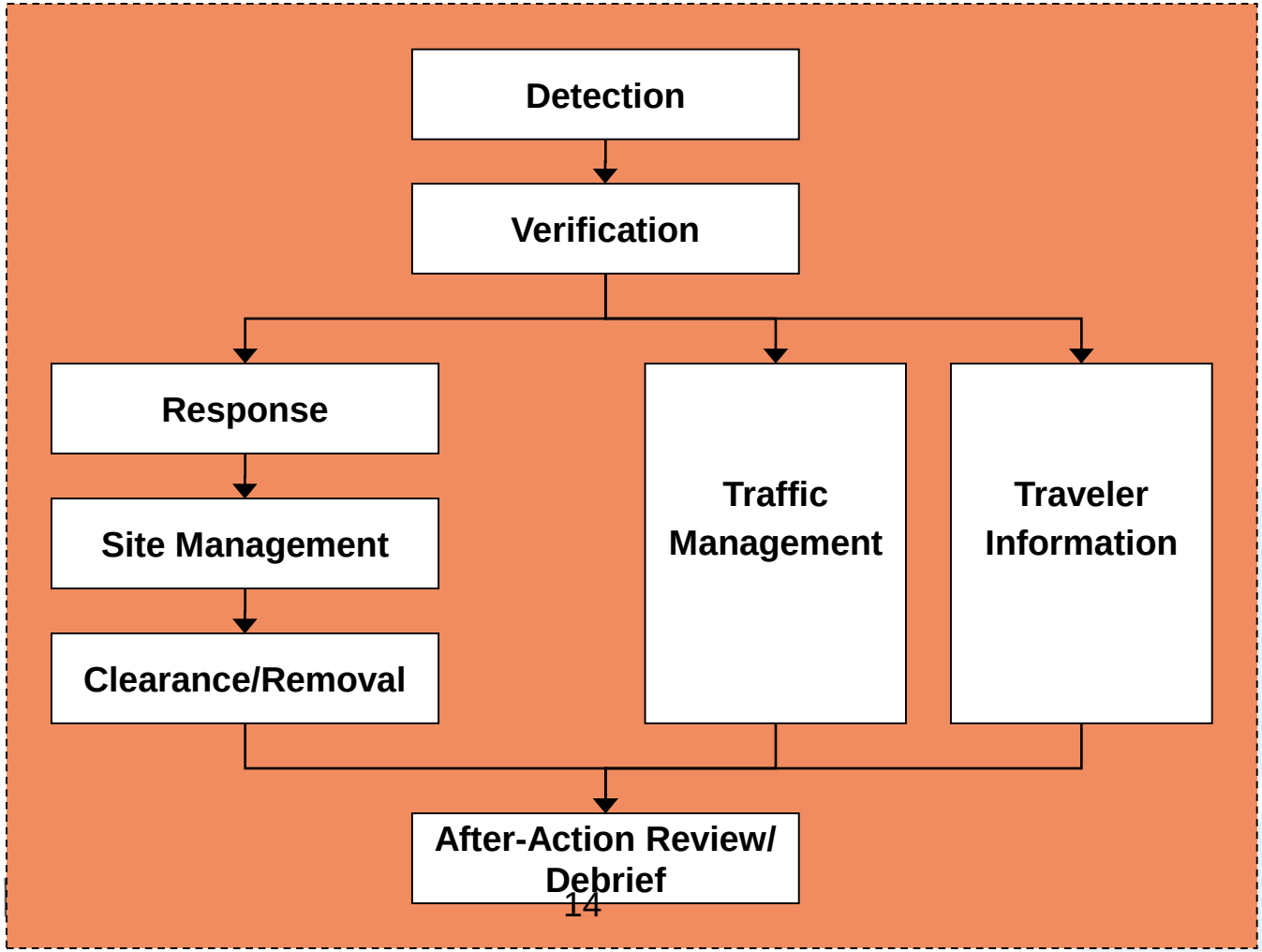
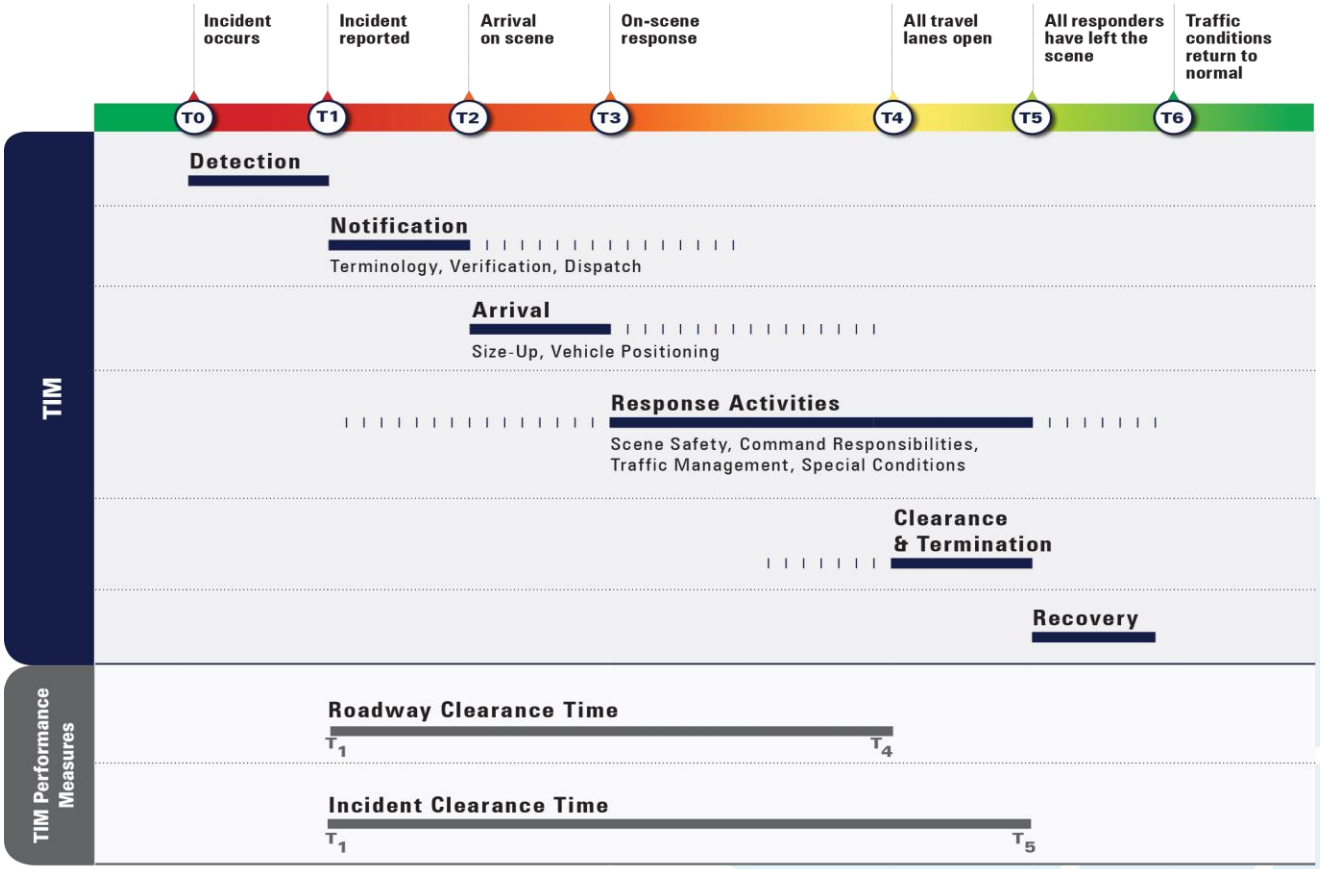
TIM Coalition Case Study

- Nevada's TIM Coalition
  - Organizing for better incident response in I-15 work zone in Las Vegas
  - Brought partners together
  - Identified tools/processes agencies could use
    - Existing traffic ops center, cameras
    - Notification processes
- Foundation for regional coalitions
  - Urban areas – Las Vegas, Reno/Washoe
  - Rural areas – Elko, Winnemucca, Tonopah

TIM Process


Detection
Verification
Response
Site Management
Clearance/Removal
Traffic Management
Traveler Information
After-Action Review/ Debrief

Incident Timeline: What Does Safe Quick Clearance Mean?



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Tow Operators and TIM

- Critical part of incident response and clearance
- Unique practices:
  - Heavy tow incentive programs (Georgia)
  - TIM Training required for Tow Contractors (CA, AZ, VA)

Towing – CVC 21719

- Tow operators can use the center median or right shoulder
  - A peace officer determines the obstruction is causing unnecessary delay.
  - A peace officer gives permission to the tow truck driver.
  - The tow truck is operated at a prudent speed with due regard for weather, visibility, and traffic.
  - The tow truck displays flashing amber warning lamps to the front, rear, and both sides.

Freeway Service Patrol

- Trained personnel using specially equipped vehicles to:
  - patrol congested highways,
  - search for and respond to traffic incidents, and
  - provide motorist assistance
- Benefit-to-Cost Ratio (Davies 2016)
  - Sac/Yolo 7:1
- WAZE may be a tool to speed dispatch/response

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TIM Training

- Multi-disciplinary training with national curriculum
- Develops cadre of emergency responders who work together at an accident scene in a coordinated manner
- Improves safety to responders and travelers
- Developed by responders for responders

CA TIM Training

- 14 1.5-day “Train-the-Trainer” courses
- 795 4-hour responder courses
- 16,452 total responders trained in CA
  - 460 instructors trained
  - 12,745 responders trained in classes
  - 3,150 responders trained online
  - 97 responders trained with CT video

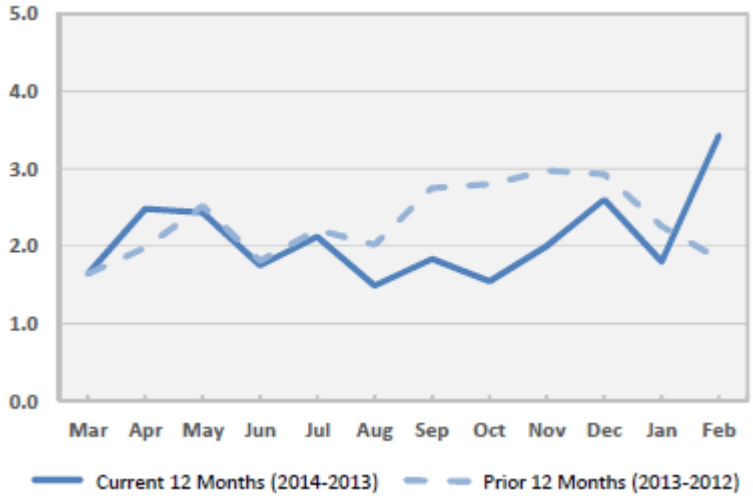
- Institutionalized:
  - CHP Academy
  - Caltrans Maintenance Academy (NEMO)
  - Towing rotation/FSP
  - EMSA CEUs
  - LEMSA contract requirement

TIM Training Program

- Who has been involved in the TIM Training in this region?
- Who hasn't, but should, be part of a future training session?
- What other types of TIM training are needed here?

Measuring Success

- What Gets Measured Gets Performed...
- Quantifying TIM benefits will advance program continuity:
  - Builds critical mass for program support from managers and elected officials
  - Ensures buy-in from key TIM stakeholders
- Supports allocation of technical and budget resources
- ***Informs future response strategies and coordination needs***



TIM Performance Measures

- "Roadway" Clearance Time
  - *"One Minute of Delay = 4X Traffic Queue"*
  - Time from first record of an incident by a responsible agency to all lanes being open to traffic
- "Incident" Clearance Time
  - Time from first record to time last responder leaves scene
- Secondary Crashes
  - *"Each Hazard Minute = +2.8% risk increase"*
  - Crashes beginning with the time of detection of the primary incident
    - within the incident scene or
    - within the queue, including the opposite direction

TIM Take Aways

- Develop a TIM “program”
- Include all of the critical stakeholders in TIM activities
- Know the NUG and the NUG framework
- Take advantage of the TIM training
  - Provide time for your instructors to train and for your personnel to attend training
  - Video
  - Online

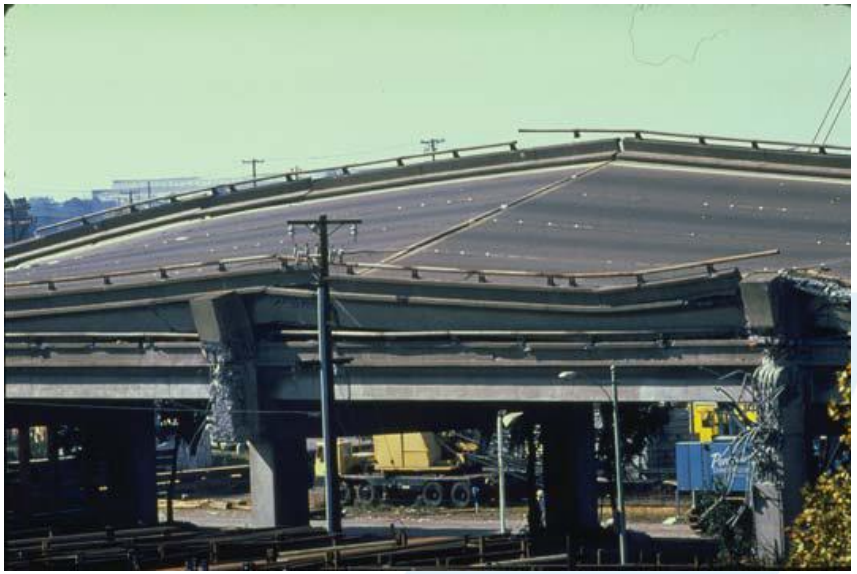
Emergency Operations

Types of Emergency Events

- Tsunamis/Tornadoes
- Floods
- Heavy rains
- Earthquakes
- Wild Fires
- Winter Weather / Snow and Ice Storms
- Homeland Security / Catastrophic Infrastructure emergencies

Common Characteristics of These Events

- Large scale impact
- Can happen anytime, often without warning
- Transportation is critical to effective response
  - Whether transportation infrastructure is affected or not



Emergency Operations

- What have been some major events to impact the 101 Corridor?
  - What worked well to respond
  - What were some items that did not work well
  - How have processes changed as a result
- What types of events do agencies usually plan for?

Emergency Operations Goals

- Minimize the impact of disaster on people, property, environment, and the economy.
- Assure mobility of the public and emergency response personnel.
- Assure agency continuity.
- Protect agency facilities and resources.

Emergency Operations Practice Areas

- Interagency Coordination and Communication
- Policy/MOUs
- Threats and Vulnerabilities
- Emergency Operations
- Equipment
- Mutual Aid
- Notification, Awareness, and Information Sharing

Emergency Operations Planning

- Define needs by type of emergency event
- Define stakeholders, partners, and resources
- Develop Concept of Operations for emergency response
  - Emergency operations center
  - Roles and responsibilities
  - Staffing - especially maintenance & operations needs
  - Relationship of transportation management center

Interagency Coordination and Communication

- Coordination and communication is key during the emergency
  - Public information coordination needs to be included
- Communications interoperability
  - Interagency communications are critical
  - Options include common radio frequencies and mobile phones
- Interagency training is important to coordination and communication

Policy/MOUs

- Protection of vulnerable systems/components
- Critical infrastructure protection
- Cooperation between enforcement and transportation agencies for closing roadways
  - CHP/CT Joint Operational Policy Statements
  - Streets and Highways Code 92 – Caltrans owns infrastructure - any act necessary
  - CA Vehicle Code 2400 – CHP has primary investigative authority – Incident Commander
  - Natural link to TIM

Make Sure Your Plan Includes

- Availability and staging of resources
  - Keep in mind non-transportation resources
- Operational Strategies, including:
  - Evaluation of alternate routes and shoulder use
  - Contraflow Operations
  - Traffic Signal Operation
  - Suspension of work zones
  - Mobilization of contractors and equipment
- Use of public transportation
- Traveler information

Vulnerability Assessment

- Identifies system components that may be weak spots in emergency or disaster situations
  - Identify, quantify, prioritize (or rank) the vulnerabilities in a system
- Helps identify critical parts of the system that should be:
  - Improved (made less vulnerable)
  - Protected
  - Monitored

Keeping Emergency Operations Plans Current

- After event de-briefing
- Routine maintenance and monitoring
- Updating emergency plans, contacts, resources
- Training Exercises
- Human factor – What if?

Equipment

- Equipment inventory management
  - List of resources and their location – GPS, Responder
  - Include TIM, maintenance, ITS resources
- Traffic control equipment / traffic management systems
  - TMC
  - Roadway/weather conditions (e.g. RWIS)
- Telecommunications and power
- Hazardous materials management
- Mapping and information equipment
- Emergency notification equipment

Notification, Awareness, and Information Sharing

- Coordination and notification processes
  - Multiple means of notification
  - Media contacts / sharing info with the public
- Information sharing among response agencies
- Role of transportation agencies
  - Maintenance/Operations
  - Traveler information, public outreach, media relations
    - QuickMap, 511, CMS, HAR, Internet, Social Media
    - Emergency Alerts
    - TV, Radio, print media
    - Public information specialists

ETO Considerations

- Looking ahead, what are the priority items that need to be addressed to support response to emergencies?
  - Hint – is it a plan, a policy, training?
- What can agencies start doing today?

Planned Special Events

- Permanent multi-use venues
  - Sporting events
  - Concerts
  - Festivals
  - Conventions
- Less frequent public events
  - Parades
  - Fireworks displays
  - Bicycle races
  - Motorcycle rallies
  - Seasonal festivals

What are your main special events?

Benefits of Managing Planned Special Events

- Promote interagency coordination, resource utilization and sharing
- Incorporate new procedures, plans, and practices into day-to-day operation of agencies
- Form partnerships and build trust
- Reduce traffic congestion
- Improve mobility
- Improve travel safety